

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended): A method for fabricating a capacitor of a semiconductor device, comprising the steps of:

- (a) forming a conductive silicon layer for a bottom electrode on a substrate;
- (b) forming a first silicon oxide layer on the conductive silicon layer;
- (~~bc~~) ~~nitridating the conductive silicon layer~~forming a first silicon nitride layer on the first silicon oxide layer;
- (~~ed~~) ~~oxidizing the nitridated conductive silicon layer~~forming a second silicon oxide layer on the first silicon nitride layer;
- (~~de~~) forming a second silicon nitride layer on a surface of the second silicon oxide ~~oxidized~~ layer;
- (ef) forming a dielectric layer on the second silicon nitride layer; and
- (fg) forming a top electrode on the dielectric layer.

Claim 2 (Currently Amended): The method as recited in claim 1, wherein ~~at~~ in the step (~~ed~~), a native oxide layer is used.

Claim 3 (Original): The method as recited in claim 2, wherein the native oxide layer is formed in a thickness ranging from about 1 Å to about 5 Å.

Claim 4 (Currently Amended): The method as recited in claim 3, wherein ~~at~~ in the step (~~bc~~), a thermal treatment process is carried out in an atmosphere of NH₃ gas and at a pressure ranging from about 10 Torr to about 100 Torr.

Claim 5 (Original): The method as recited in claim 4, wherein the silicon nitride layer is formed by using a source of dichlorosilane (DCS) in an atmosphere of NH₃ gas and at a pressure ranging from about 1 Torr to about 10 Torr.

Claim 6 (Original): The method as recited in claim 3, wherein the dielectric layer is comprised of a material having one of a high dielectric constant and being a ferroelectric substance.

Claim 7 (Original): The method as recited in claim 6, wherein the material is one selected from a group of Ta_2O_5 , Al_2O_3 , HfO_2 , $(\text{Ba},\text{Sr})\text{TiO}_3$ (BST) $(\text{Pb},\text{Zr})\text{TiO}_3$ (PZT), $(\text{Pb},\text{La})(\text{Zr},\text{Ti})\text{O}_3$ (PLZT), and $\text{Bi}_4\text{-XLaXTi}_3\text{O}_{12}$ (BLT) .

Claim 8 (New): The method as recited in claim 1, further comprising the step of performing a thermal treatment process for densifying the first silicon oxide layer in order to minimize oxidization of the conductive silicon layer before the step (c).

Claim 9 (New): The method as recited in claim 1, further comprising the step of performing a thermal treatment process for improving device characteristics and crystallization of the dielectric layer after the step (f).